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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,146	05/24/2001	Shin Abe	P/1071-1348	2825

7590 12/02/2003

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EXAMINER
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GLENN, KIMBERLY E

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 12/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/865,146	ABE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kimberly E Glenn	2817	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 August 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3,4,6,8 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3,4,6,8 and 10-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☒ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
     a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                              | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>06032003</u> | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 3, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Black US Patent 2,779, 925.

Black disclose a composite coaxial resonator comprising a central core 11, a inner conductor 12 comprised of a plurality of lamination of a conducting material 13 and insulating material (polyethylene) 14, and intermediate dielectric member 23, a outer conductor 15 comprising a plurality of lamination of a conducting material 16 and insulating material 17 and another dielectric member 20 disposed between the central core and the intermediate dielectric member 23. Black disclose in column 2 that the dielectric constants of the dielectric is equal to  $\epsilon_1 = \epsilon_2(1 + W/t)$  wherein  $\epsilon_1$  is the dielectric constant of the main dielectric element between the two conductors,  $\epsilon_2$  is the dielectric constant of the insulating material between the conducting material, W is the thickness of one of the conducting material and t is the thickness of the insulating material. Solving for t or W shows that the thickness of conducting material or the thickness of the insulating material is based on the dielectric constant of the dielectric materials disposed between the conductors. (Column 1; line 71 through column 2; line 13, column 3; line 5 through column 4; line 48)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8, 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al US Patent 5,293,141 in view of Black US Patent 2,779,925.

Kobayashi et al disclose a dielectric filter comprising a plurality of coaxial resonators 25-27. Kobayashi et al also teaches that the dielectric filters can be using in antenna duplexer having a Tx input electrode 46k and Rx output electrode 46m. The Tx input electrode is connected to a transmitter 53 and the Rx output electrode is connected to a receiver 54. (Figures 1 and 22-29)

Kobayashi et al is shown to teach all the limitation of the claim with the exception of the coaxial resonator comprising: an inner conductor formed on an outer surface of a columnar element; a dielectric element having a hole formed therein, the columnar element being disposed in the hole, an outer conductor formed on an outer surface of the dielectric element and a non-conducting element disposed between the columnar element and the dielectric elements wherein the inner conductor has a multi-layer electrode structure in which conductor layers and dielectric layers are alternately laminated, wherein a thickness of the conductor layers and a thickness of the dielectric layers are based on the non-conducting element.

Black teaches a composite coaxial resonator comprising a central core 11, a inner conductor 12 comprised of a plurality of lamination of a conducting material 13 and insulating

material (polyethylene) 14, and intermediate dielectric member 23, a outer conductor 15 comprising a plurality of lamination of a conducting material 16 and insulating material 17 and another dielectric member 20 disposed between the central core and the intermediate dielectric member 23. See 35 USC 102 rejection for details of Black reference.

One of ordinary skill in the art would have replaced the general coaxial resonator of Kobayashi et al with the coaxial resonator of Black since examiner takes notice of the equivalent of the general coaxial resonator and the coaxial resonators of Black for their use in the filter art and the selection of any of these known equivalents to provide a resonance would be within the level of ordinary skill in the art.

#### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly E Glenn whose telephone number is (703) 306-5942. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (703) 308-4909. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Kimberly E Glenn  
Examiner  
Art Unit 2817

keg



Robert Pascal  
Supervisory Patent Examiner  
Technology Center 2800